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EXAMINER	
FRINK, JOHN MOORE	

ART UNIT	PAPER NUMBER
2142	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/652,255	BASU ET AL.	
	Examiner	Art Unit	
	John M. Frink	2142	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-55 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-55 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date 1/16/2007,4/04/2005,8/29/2003.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1,19, 21, 38, 39, 46 - 50 and 54 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements/steps, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted steps/elements are: that the network is a multihop wireless network, that the nodes are autonomous or semi-autonomous robotic nodes, that at least a subset of the robotic nodes are controllably moved to new locations in order to transform the ad-hoc network from a non-biconnected states to a biconnected state, that the (critical) non-biconnected state is determined by generating a network graph, and identifying a cutvertex which is to be removed by the controlled movement of said subset of nodes (as is specified in Applicant's disclosure, pgs. 1 – 3 and 6 – 9).

For the purposes of making this examination as complete as possible, the above independent claims were examined as if they contained said omitted elements/steps.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1 – 7, 9 – 12, 14 – 28, 30 – 33, 35 – 42 and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Garg et al. (Improved Approximation Algorithms for Biconnected Subgraphs via Better Lower Bounding Techniques), hereafter Garg, in view of Li et al. (Sending Messages to Mobile Users in Disconnected Ad-hoc Wireless Networks), hereafter Li, and further in view Templin (US 2001/0040895 A1).

5. Regarding claim 1, Garg shows method for achieving biconnectivity in a network that includes a plurality of nodes, the method comprising: forming blocks from groups of one or more of the nodes in the network; selecting one of the blocks as a root block; identifying other ones of the blocks as leaf blocks; and modifying the edges to make the network biconnected (3.1, 4.1, 4.4).

Garg does not show moving one or more of the leaf blocks to make the network biconnected.

Li shows moving nodes in an ad-hoc (MANET) environment in order to improve network communication, where the nodes are autonomous or semi-autonomous robotic nodes (Sections 1, 5), and further where when nodes maintain their neighbors, calculations are simplified (Section 5.1).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the disclosure of Garg with that of Li in order to provide for a method for the semi-autonomous robotic nodes of Li's disclosure to efficiently orient and network themselves in a biconnected network, which, due to the lack of cutvertices,

provides a reliable network configuration (an inherent property of biconnected networks, Mount, pg. 1).

Garg in view of Li do not show where the node movements are done in blocks.

Templin shows where node movement should be minimized, as it results in increased transmissions and can temporarily diminish network performance ([0039]).

It would have been obvious to further modify disclosure of Grag in view of Li with that of Templin, and thus move nodes in group block movements, in order to minimize overall node movement and maintain nodes neighbors to the greatest extent possible, thus decreasing transmission costs and improving network performance (Templin [0039]).

6. Regarding claim 21, Garg in view of Li and Templin further show in a network that includes a plurality of nodes, at least one of the nodes comprising: a network device that is capable of moving within the network; and a movement controller (Li, Section 1) configured to: generate a current view of the network (Garg, 3.1.1, 4.4), form blocks from groups of one or more of the nodes in the network based on the current view of the network (Garg, 3.1, 4.1, 4.4), and identify one or more of the blocks, as one or more identified blocks, to move (Li, Sections 1 and 5, Templin [0039]) to make the network biconnected (Garg, 3.1, 4.1, 4.4).

7. Regarding claim 30, Garg in view of Li and Templin further show where the movement controller is further configured to determine a distance and direction that the one or more identified blocks should move (Li, Section 1).

8. Regarding claim 2, Garg in view of Li and Templin further show wherein the forming blocks includes: generating a graph of a current view of a topology of the network (Li, Sections 5, 5.1), and generating a block tree based on the current view of the topology of the network, the block tree organizing the nodes into one or more blocks (Garg, 3.1.1, 4.4).

9. Regarding claims 3 and 24, Garg in view of Li and Templin further show where the generating a graph includes: determining locations of the nodes in the network, and determining the current view of the topology of the network based on the locations of the nodes in the network (Li, Sections 5, 5.1).

10. Regarding claim 4 and 25, Garg in view of Li and Templin further show where the determining locations of the nodes includes: periodically receiving updates from the nodes, each of the updates includes a location of a corresponding one of the nodes. (Li, Sections 5, 5.1).

11. Regarding claim 5 and 26, Garg in view of Li and Templin further show where the determining locations of the nodes further includes: extracting neighbor information from the updates (Li, Section 5, where Li discloses that if you directly receive an update from a node, it is a neighbor).

12. Regarding claim 6 and 27, Garg in view of Li and Templin further show identifying cutvertices in the network (Garg, 3.1.1).

13. Regarding claim 7, Garg in view of Li and Templin further show where the moving one or more (Li, Section 1, where nodes are moved to improve network

performance) of the leaf blocks includes: moving one or more of the leaf blocks to remove one or more of the cutvertices from the network (Garg, 3.1.1, 3.1.2, 4.4).

14. Regarding claim 9, the moving one or more of the leaf blocks includes: moving all of the nodes within one of the leaf blocks collectively when the leaf block is moved (Li, where the leaf blocks are moved collectively to minimize messaging and transmissions costs Templin ([0039]) and to simplify calculations by maintaining nodes neighbors to the greatest extent possible (Li Section 5.1)).

15. Regarding claim 10 and 31, Garg in view of Li and Templin further show where the one or more of the leaf blocks are moved while minimizing a total distance moved by all of the nodes in the network (where Templin ([0039] shows minimizing node movement along with Li (Section 1)).

16. Regarding claim 11 and 32, Garg in view of Li and Templin further show where the moving one or more of the leaf blocks includes: moving each of the one or more of the leaf blocks, as a particular leaf block, towards a nearest node in a parent block (in order to create the biconnected network disclosed by Garg (3.1 – 3.1.2, 4.4) utilizing Templin's ([0039]) and Li's (Section 5.1) disclosures of minimizing node movement and keeping the changes of nodes neighbors minimized).

17. Regarding claim 12 and 33, Garg in view of Li and Templin further show where the particular leaf block is moved towards the nearest node until at least one new edge appears between the particular leaf block and the parent block (in order to create the biconnected network by creating/drawing edges disclosed by Garg (3.1 – 3.1.2, 4.4)

utilizing Templin's ([0039]) and Li's (Section 5.1) disclosures of minimizing node movement and keeping the changes of nodes neighbors minimized).

18. Regarding claims 14 and 35, Garg in view of Li and Templin further show where the moving of one or more of the leaf blocks is performed after final positions for the one or more of the leaf blocks is determined (where Li discloses that maintaining the network structure simplifies calculations, Section 5.1).

19. Regarding claims 15 and 16, Garg in view of Li and Templin further show where the method is performed by one or more, or each of the nodes in the network (where Garg shows all nodes being considered (3.1) which enables creating the most reliable and fully optimized network).

20. Regarding claim 17, Garg in view of Li and Templin further show where the nodes are capable of moving on their own (Li, Section 1).

21. Regarding claims 18 and 37, Garg in view of Li further show where the nodes include robotic nodes (Li, Section 1).

22. Regarding claim 19, Garg in view of Li and Templin further show a system for achieving biconnectivity in a network that includes a plurality of nodes, comprising: means for grouping subsets of the nodes into blocks; means for identifying cutvertices in the network (Garg, 3.1, 3.1.1-3.1.2, 4.1); and means for iteratively (Garg, 3.1-3.1.2) moving one or more of the blocks (Li, 5.1) to remove the cutvertices (Garg, 3.1-3.1.2, 4.4) from the network, where the nodes are moved in blocks to minimize the changes in nodes neighbors to simplify calculations and transmissions and to improve performance (Li, 5.1 and Templin [0039]).

23. Regarding claim 20, Garg in view of Li and Templin further show where the network becomes biconnected when all of the cutvertices have been removed from the network (Garg, Section 1).

24. Regarding claim 22, Garg in view of Li and Templin further show where the movement controller is further configured to instruct the network device to move to a particular location when the at least one node is one of the nodes in one of the one or more identified blocks (Li, Sections 1 and 5; Garg 3.1-3.1.2 and 4.4).

25. Regarding claim 23, Garg in view of Li and Templin further show all of the nodes within the one of the one or more identified blocks move collectively (Li, where the leaf blocks are moved collectively to minimize messaging and transmissions costs Templin ([0039]) and to simplify calculations by maintaining nodes neighbors to the greatest extent possible (Li Section 5.1)).

26. Regarding claim 28, Garg in view of Li and Templin further show where when identifying one or more of the blocks to move, the movement controller is configured to identify a distance and direction to move the one or more identified blocks (Li, Section 1, where nodes are moved to improve network performance) so as to remove one or more of the cutvertices from the network (Garg, 3.1.1, 3.1.2, 4.4).

27. Regarding claim 36, Garg in view of Li and Templin further show where the at least one node includes all of the nodes in the network (Garg, 3.1 – 3.1.2).

28. Regarding claim 38, Garg in view of Li and Templin further show a method for achieving biconnectivity in a network that includes a plurality of nodes, the method comprising: generating a graph of the network; identifying cutvertices in the network

(Garg, Sections 3.1, 3.1.1-3.1.2, 4.4); and moving one or more of the nodes in the network (Li, Section 1) to systematically remove the cutvertices from the network and form a biconnected network (Garg 3.1, 4.1, 4.4).

29. Regarding claim 39, Garg in view of Li and Templin further show a method for achieving biconnectivity in a non-biconnected network that includes a plurality of nodes, the method comprising: identifying one or more of the nodes to move (Li, Section 1); determining direction and distance to move the one or more nodes; and moving the one or more nodes in the determined direction and distance to transform the non-biconnected network to a biconnected network (Garg, 3.1-3.1.2, 4.1, 4.4).

30. Regarding claim 40, Garg in view of Li and Templin further show where the identifying one or more of the nodes to move includes: forming blocks from groups of at least one of the nodes in the non-biconnected network, selecting one of the blocks as a root block, and identifying other ones of the blocks as leaf blocks (Garg, 3.1, 4.1, 4.4).

31. Regarding claim 41, Garg in view of Li and Templin further show where the one or more nodes are included in one or more of the leaf blocks (Garg 3.1 – 3.1.2).

32. Regarding claim 42, Garg in view of Li and Templin further show moving the one or more nodes includes: moving the one or more nodes collectively with other ones of the one or more nodes within a same one of the leaf blocks (Li, where the leaf blocks are moved collectively to minimize messaging and transmissions costs Templin ([0039]) and to simplify calculations by maintaining nodes neighbors to the greatest extent possible (Li, Section 5.1)).

33. Regarding claim 49, Garg in view of Li and Templin further show a computer-readable medium that includes instructions that when executed by at least one processor causes the processor to perform a method for achieving biconnectivity in a network that includes a plurality of nodes, the computer-readable medium comprising: instructions for determining a current topology of the network (Li, Section 5.5.1 and Garg Sections 3.1.1-3.1.2); instructions for identifying cutvertices in the network based on the current topology of the network (Garg Sections 3.1.1-3.1.2); and instructions for identifying one or more of the nodes in the network to move (Li, Section 1) to systematically remove the cutvertices from the network and form a biconnected network (Garg, Section 1).

34. Claims 8 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Garg in view of Li and Templin as applied to claims 1 and 21 above, and further in view of Jennings et al. (Topology Control for Efficient Information Dissemination in Ad-hoc Networks), hereafter Jennings.

Garg in view of Li and Templin show claims 1 and 21.

Garg in view of Li and Templin do not show where the selecting one of the blocks includes, or where the movement controller is configured to identify one of the blocks that includes a maximum number of nodes as the root block.

Jennings shows identifying one of the blocks that includes a maximum number of nodes (Section III).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the disclosure of Garg in view of Li and Templin with that of

Jennings in order to minimize node movement (Templin [0039]) which improves performance. As disclosed in claim 1, the leaf blocks rather than the root blocks are moved, and thus the larger the root block, the smaller the leaf blocks, and the less movement occurs.

35. Claims 13 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Garg in view of Li and Templin as applied to claims 1 and 21 above, and further in view of Khuller et al. (Biconnectivity Approximations and Graph Carvings), hereafter Khuller.

36. Claims 43, 44, 46, 47 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Garg in view of Li and Templin as applied to claim 39 above, and further in view of Liao et al. (GRID: A Fully Location-Aware Routing Protocol for Mobile Ad Hoc Networks), hereafter Liao, and Gibson et al. (US 6,362,821 B1), hereafter Gibson.

37. Regarding claim 43, Garg in view of Li and Templin show claim 39.

Garg in view of Li and Templin do not show determining the geographic center of the network and determining weighted distances for moving the one or more nodes to toward the geographic center.

Liao shows determining the geographic center of the network (Sections 3.1, pg.8; 3.3, pg. 15, pg. 6).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the disclosure of Garg in view of Li and Templin with a that of Liao in order to locate the area of the network with the average lowest distance to other nodes,

as such short distances, corresponding to node density can improve performance (Liao pg. 23).

Garg in view of Li, Templin and Liao do not show determining the weighted distances for moving one or more nodes toward said center.

Gibson shows determining said weighted distances (Section 5, lines 1 – 7).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the disclosure of Garg in view of Li , Templin and Laio with a that of Gibson in order to provide a route for any node to move to the center of its network, thus allowing for all nodes to move the shortest distances to improve network density and thus performance (Liao, pg. 23).

38. Regarding claim 44, Garg in view of Li, Templin, Laio and Gibson further show where the weighted distances (Gibson col. 5 lines 1 – 7) are related to distances that the nodes are from the geographic center (Liao Sections 3.1 pg .8, 3.3 pg. 15, pg 6).

39. Regarding claim 46, Garg in view of Li, Templin, Laio and Gibson further show a method for achieving biconnectivity in a non-biconnected network that includes a plurality of nodes (Garg 3.1, 3.2, 4.4), the method comprising: determining a geographic center of the non-biconnected network (Liao 2.4, 3.1-3.2); and moving each of one or more of the nodes a weighted distance (Gibson col. 5 lines 1 – 7) towards the geographic center to transform the non-biconnected network to a biconnected network (Garg 3.1, 3.2, 4.4).

40. Regarding claim 47, Garg in view of Li , Templin, Laio and Gibson further show in network that includes a plurality of nodes, at least one of the nodes comprising: a

network device that is capable of moving within the network; and a movement controller configured to (Li, Section 1): determine locations of the nodes, identify a geographic center of the network based on the locations of the nodes (Liao, 2.4, 3.1-3.2), and determine a weighted distance (Gibson, col. 5 lines 1 – 7) that each of the nodes should move (Li, Section 1) toward the geographic center to achieve biconnectivity in the network (Garg 3.1, 3.2, 4.4).

41. Regarding claim 48, Garg in view of Li , Templin, Laio and Gibson further show a system for achieving biconnectivity in a non-biconnected network that includes a plurality of nodes(Garg 3.1, 3.2, 4.4), the system comprising: means for identifying a geographic center of the non-biconnected network based on current locations of the nodes (Liao, 2.4, 3.1-3.2); and means for causing each of one or more of the nodes to move (Li, Section 1) towards the geographic center (Gibson, col. 5 lines 1 – 7) to transform the non-biconnected network to a biconnected network (Garg 3.1, 3.2, 4.4).

42. Claims 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over Garg in view of Li, Templin, Liao and Gibson as applied to claim 43 above, and further in view of Proctor, Jr. et al. (5,960,047), hereafter Proctor.

Garg in view of Li, Templin, Liao and Gibson show the method of claim 43.

Garg in view of Li, Templin, Liao and Gibson do not show where the direction for a particular node of the one or more nodes includes a straight line joining a starting position of the particular node and the geographic center.

Proctor shows where a straight line is the shortest distance between two points, and thus the most efficient path (col. 3 line 65 – col. 4 line 5).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the disclosure of Garg in view of Li, Templin, Liao and Gibson with that of Proctor in order for the nodes to take the fastest and most efficient path when moving.

43. Claims 50 – 52 and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hsu (Simpler and faster biconnectivity augmentation) in view of Li.

44. Regarding claim 50, Hsu shows a method for achieving biconnectivity in a one-dimensional non-biconnected network that includes a plurality of nodes, comprising: determining initial positions of the nodes in the one-dimensional non-biconnected network (Abstract, Section 1) as well as determining this with linear programming (Sections 1 and 3).

Hsu does not show determining a movement schedule and causing one or more of the nodes to move based on the determined movement schedule.

Li shows determining a movement schedule and causing one or more of the nodes to move based on the determined movement schedule (Section 1).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the disclosure of Hsu with that of Li in order to provide for a method for the semi-autonomous robotic nodes of Li's disclosure to efficiently orient and network themselves in a biconnected network, which, due to the lack of cutvertices, provides a reliable network configuration (an inherent property of biconnected networks Mount, pg. 1).

45. Regarding claim 51, Hsu in view of Li further show determining the movement schedule as an objective function, converting the objective function into a linear programming representation, and solving the linear programming representation optimally in polynomial time (Hsu, Abstract, Sections 1 and 3).

46. Regarding claim 52, Hsu in view of Li further show where the linear programming representation is solved as a function of a number of nodes in the one-dimensional non-biconnected network (Hsu Section 3).

47. Regarding claim 54, Hsu in view of Li further show a system for achieving biconnectivity in a one-dimensional non-biconnected network that includes a plurality of nodes, comprising: means for determining initial positions of the nodes in the one-dimensional non-biconnected network (Hsu, Abstract, Sections 1 and 3); means for determining a movement schedule optimally in polynomial time based at least in part on the initial positions of the nodes and a number of the nodes in the one-dimensional non-biconnected network (Hsu, Abstract, Sections 1 and 3, where Hsu discloses a solution in linear time, which is inherently faster than polynomial time and thus is inclusive of any polynomial time solutions, and Li, Section 1); and means for causing one or more of the nodes to move based on the determined movement schedule to achieve biconnectivity in the one-dimensional non-biconnected network (Li, Section 1, and Hsu, Sections 1 – 3).

48. Claims 53 and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hsu in view of Li as applied to claims 50 and 54 above, and further in view of Lin et al. (Adaptive Clustering for Mobile Wireless Networks), hereafter Lin.

49. Regarding claim 53, Hsu in view of Li show the method of claim 50.

Hsu in view of Li do not show where each of the nodes in the biconnected network is capable of communicating with other ones of the nodes in the biconnected network one and two hops away.

Lin shows where each of the nodes in the biconnected network is capable of communicating with other ones of the nodes in the biconnected network one and two hops away (Sections 1, 2(A)).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the disclosure of Hsu in view of Li with that of Lin in order to provide for the most reliable and efficient network that allows all nodes to properly communicate.

50. Regarding claim 55, Hsu in view of Li and Lin show each of the nodes is capable of communicating with other ones of the nodes one and two hops away after biconnectivity is achieved in the one-dimensional non-biconnected network (Hsu, Sections 1-3, Lin Sections 1 and 2(A)).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John M. Frink whose telephone number is (571) 272-9686. The examiner can normally be reached on M-F 7:30AM - 5:00PM EST; off alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on (571)272-3868. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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